

**Iowa Department of Natural Resources  
Environmental Protection Commission**

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ITEM

**10**

DECISION

TOPIC

**Contract – Windsor Solutions, Inc. – Facility Application Rebuild**

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**RECOMMENDATION**

The Department requests Commission approval of a contract in the amount of \$165,000 with **Windsor Solutions, Inc.** for rebuilding computer applications related to the Environmental Facilities Database warehouse, also known as “One Stop”. The contract will be from Nov. 17, 2008 through Sept. 30, 2009, with optional renewals up to 6 years.

**FUNDING SOURCE**

Funding for the contract is 100% **federal** funding from EPA Exchange Network grants.

**BACKGROUND**

The Department of Natural Resources (DNR) developed the One Stop data warehouse in 2004 to bring together core environmental information in one place for easy access by DNR staff and the public.

The Facility Explorer application is a web and GIS based tool for searching/displaying environmental facilities in Iowa. Internal users with security also have the ability to edit facility locations using a map based interface, called Facility Maintenance

**PURPOSE**

**Goals** for rebuilding the Facility Explorer/Maintenance applications include:

- Improve maintainability of application
- Use new mapping functionality provided by ArcGIS Server
- Make the application easier to use
- Add needed search and display functionality
- Add a Site Reconciliation module

**CONTRACTOR SELECTION**

The Request for Proposal process was handled by the Iowa Department of Administrative Services, and a team of three DNR staff reviewed the proposals according to state guidelines.

This contractor was chosen because they have extensive experience in this area and they developed a very well-thought out proposal that addressed each set of requirements in detail. They had the highest total score of the five proposals submitted.

Their **experience** includes the following.

- Developed a facility information management system for seven other states’ environmental agency; including data warehouses and a site reconciliation process.

- Wrote the Facility Identification Template for States (FITS), the Facility Data Standard and the Facility Identification Data Exchange which are the national standards for this data.
- Developed an innovative application for Iowa DNR and three other states to provide environmental facility data and chemical storage data to emergency responders. This application is now being implemented by six other states, and considered by several others.
- Their GIS Specialist has experience with ArcGIS Server, is on the nation Geospatial Task Force for the Exchange Network, and has authored white papers on GIS for the Exchange Network.

For an outline of the **scope of work**, see the attached, *DNR Facility Application Rebuild, RFP Section 4*.

Chuck Corell, Water Quality Bureau Chief  
Environmental Services Division  
October 20, 2008

## SECTION 4 SPECIFICATIONS AND TECHNICAL REQUIREMENTS

### 4.1 Overview

The successful Contractor shall provide C# and MS SQL Server 2005 application development services to the Iowa Department of Natural Resources (DNR) in accordance with the technical specifications defined in this Section. The Bidder shall address each requirement in this Section and explain how it shall comply with each requirement. Bid Proposals must be fully responsive to each requirement. Merely repeating the requirements may be considered non-responsive and may disqualify the Bidder. Bid Proposals must identify any deviations from the requirements of this RFP or requirements the Contractor cannot satisfy. Any deviations from the requirements of Section 4 or any requirement of Section that the Contractor cannot satisfy may disqualify the Contractor. The DNR reserves the right to determine whether the supportive materials submitted by the Bidder demonstrate the Bidder shall be able to comply with the Mandatory Requirements. If the Department determines the supportive materials do not demonstrate the Supplier will be able to comply with the Mandatory Requirements, the Lead Agency may disqualify the Bid Proposal. The successful Contractor shall be obligated to provide all goods and/or services specified in this Section. It is the intent of the DNR to select one Contractor.

The successful proposal shall rebuild the Facility Explorer/Maintenance application to explore environmental information collected by Iowa DNR. This includes two parts:

#### Part 1: Application Rebuild

This includes the following parts from the Detailed Requirements (see Attachment 6).

- Facility Explorer: all parts, including General Requirements, Menu, Map Page, Web Pages
- Facility Maintenance General Requirements, Menu, and Map Page

#### Part 2: Optional Reconciliation Module

This includes the following parts from the Detailed Requirements (see Attachment 6).

- Facility Maintenance Web Pages for Reconciliation Module

Depending on cost, the Reconciliation Module may or may not be included in the project.

In its response to the RFP, a prospective vendor shall include comprehensive and concise statements that address and demonstrate its understanding of each of the following.

### 4.2 High Level Work Plan

The contractor shall develop a High Level Work Plan which will include a detailed design plan, testing plan, and a schedule for implementation. Detailed requirements for each are described below.

- Detailed Design Plan:** Using the reference documents in the appendices, the contractor shall develop a detailed design plan which includes, but is not limited to:
- Testing Plan:** The contractor shall develop a unit and integration testing plan to ensure each function is tested and has appropriate field level validation to protect against SQL injection or cross scripting attacks. In addition, the contractor shall assist DNR in developing a user acceptance test plan.
- Schedule:** The contractor shall develop a schedule to implement all phases of the project. In general, it is expected the system shall be in production within five months after the start of the project, and include six months of post-development support. The schedule shall also include regular coordination meetings (at least bi-weekly or more frequently as needed) with user representatives, and estimated completion dates for each stage.

**4.3 Database Development** (for Part 2 only) shall include building the structure in SQL Server 2005, including all the tables, data elements and how tables are related. The Contractor shall use stored procedures for data access. DNR does not support the use of Nhibernate. The database design must be approved by DNR's Database Administrator.

**4.4 Application Development** shall implement all items in *Detailed Requirements for Facility Explorer and Facility Maintenance*, Attachment 6. The items in Attachment 7 are for further clarification. Development shall include a web front end developed in .Net using C#.

- A. The Facility Explorer application is expected to include:
  - ArcGIS Server components for Searches (Site Search, Owner Search, Zoom To and Radius Search), Layers, Map Display and Navigation, Tools, and Reports
  - 2 web pages
  - Help pages using PDFs from DNR
- B. The Facility Maintenance application is expected to include additional parts for:
  - ArcGIS Server components for additional Layers and Tools
  - Major Functions for add a point, add a program interest, move a point, link a facility, unlink a facility
  - 6 web pages
  - Help pages using PDFs from DNR
- C. The Reconciliation module is expected to include
  - 5 web pages
  - User manual
- D. The application shall use the standard DNR application navigation.

**4.5 Testing** Contractor shall be expected to unit test each module, system test the application, and stress test the application prior to turning it over for acceptance testing by the DNR. User testing will be iterative until all functions are working properly.

**4.6 Deployment into Production** Payments are predicated upon successful completion and written approval by the State of the described deliverables and tasks. Progress payments, based upon approved deliverables, will be allowable as specified in the final contract. Payments will be made to the Contractor after written approval of the payment milestones.

**4.7 Documentation and Training** shall include, at a minimum, a technical guide (including Administrator details) and (for Part 2 only) a user manual for the Reconciliation Module. Technical documentation shall include all the elements outlined in Attachment 8, Technical Documentation Elements.

- a) Technical documentation and training shall be provided to/for the Information Technology Bureau staff to support the application internally, after the support period ends for the contractor.
- b) Part 2 only: The user manual shall include how to do the functions for the Reconciliation Module. A single training session shall be provided in Des Moines for DNR staff who will use the application and the DNR database administrator(s).

#### **4.8 Post Development Support**

In this section, the prospective Contractor shall describe its current and historical experience as well as that of any proposed subcontractors or joint ventures relative to completing the work requested in the RFP. The prospective Contractor shall provide a statement which details the size (number of accounts and their annual dollar amounts) and complexity of each current or historical experience which may be relevant in evaluating the ability of the prospective Contractor to perform the work outlined in the RFP. The identities of the entities for each such current or historical experience listed in response to this section, their addresses and telephone numbers and their contact persons must be included in the description of work performed.

#### **4.9 Technical Requirements:**

- a) The system must be compatible with the DNR Current Technology Environment (Attachment 9) and DNR Information Technology staff skill sets (application and infrastructure). Service Oriented Architecture methodology and other technology proposals shall clearly outline specifics to ensure compatibility with the DNR networks and applications interfacing with the system. All changes in

technology that will affect compatibility and interfaces with DNR data shall require Department and DNR Information Technology Bureau approval in advance. DNR development standards include *SQL Server Database Programming Guidelines* and *C# Coding Guidelines for .NET* (Attachments 10 and 11).

- b) The database shall be hosted at the Department of Administrative Services (DAS) Information Technology Enterprise (ITE) server farm on IIS6.
- c) The Facility Application Rebuild must be developed using the ITE "Authentication and Authorization" (A & A) model. See Attachment 12 for API specifications.
- d) This Contractor shall follow common and known application security best practices necessary to protect State information and information systems, (i.e. OWASP).
- e) The Contractor's development standards shall avoid common web application attacks (i.e. cross scripting or SQL injection)
- f) Proposed security architecture must be capable of meeting the State Enterprise and DNR Security Policy Guidelines. The successful contractor shall review the State Enterprise Security Policy Guidelines and the DNR Security Policy and acknowledge they shall abide by these guidelines. The DNR Security Policy will be provided to the successful vendor at the start of the project. The State Enterprise Security Policy may be reviewed at the following link:  
<http://das.ite.iowa.gov/standards/documents/IowaEnterpriseSecurityPolicy050128.pdf>
- g) The Contractor shall have a plan for data protection and quality assurance during the development of the application. Specifically, the plan should address (1) back up procedures to prevent data and information from being lost; internal quality assurance (Q/A) procedures to protect against data entry errors; and internal Q/A procedures to detect errors in programming.

**4.10 Project Staffing** The Contractor must attach the resumes of personnel who will perform key functions for this project. The Contractor shall describe specific, relevant qualifications & experience(s). The bidder/vendor shall include similar information for any subcontractors to be engaged for any projects under this contract. Contractor shall detail the percentage of time each individual will devote to the contract effort; how key project persons will be replaced in the event of prolonged illness or termination of employment prior to completion of the contract effort; and each individual's specific responsibilities and, where applicable, supervisory roles. The Contractor's Project Manager should be specifically identified, along with the percentage of his or her time to be devoted to the contract. Describe any planned staffing changes required for the contract effort.

#### **4.11 Other Requirements:**

Coordination meetings shall be held no less than biweekly with user or as needed. Meetings may be in person or by phone, upon agreement of both DNR and the contractor.

If the prospective Contractor intends to use subcontractors or enter into a joint venture arrangement to fulfill the primary purposes of the RFP, the prospective Contractor shall respond to each of the above questions for each such subcontractor or joint venturer it proposes to use. If the prospective Contractor intends to use subcontractors or joint venturers to perform services (including but not limited to mailing services, printing, software programming, etc.) ancillary to the primary purposes of the RFP, the prospective Contractor shall disclose for each such proposed subcontractor or joint venturer the information requested in this chapter. Only the primary contractor may negotiate with the State. The Contractor, which submits the proposal, must certify that they are the prime contractor and that they as prime contractor accepts full responsibility and liability for its proposal and for any subsequent contract with the State.